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FILE

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C.

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In re Applications)

MM Docket No. 92-27

SOUTHWEST ALLEN COUNTY SCHOOLS)
Lafayette Township, Indiana)
Req: 91.1 MHZ, Channel 216A)
0.4 kW (H&V), 65 meters)

File No. BPED-900215MC

FAITH CHRISTIAN ACADEMY)
Berne, Indiana)
Req: 91.1 MHZ, Channel 216B1)
25 KW (H&V), 100 meters)

File No. BPED-901203MN

For Construction Permit For a New,
Noncommercial, Educational FM Station

To: Honorable Joseph Chachkin
Administrative Law Judge

PETITION FOR LEAVE TO AMEND AND AMENDMENT

Faith Christian Academy, by its attorneys, and pursuant to § 73.3522(b) of the Commission's rules files a post-designation amendment to change its frequency to Channel 217. Good cause exists for the grant of this petition. Faith Christian Academy and Southwest Allen County Schools respectively filed mutually exclusive non-commercial applications for FM radio stations on channels 216(B1) Berne, Indiana, and 216(A), Lafayette Township, Indiana. In recognition of the fact that the conflict between these two proposals would require lengthy and expensive hearings to determine which proposal should be granted, the parties entered into an Agreement to settle the case. A Joint Petition for Approval of Agreement was filed with the Commission on September 22, 1992 advising that additional time would be

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required to prepare an engineering amendment to the Faith application to remove the conflict between the two applications. In order to remove the conflict, Faith has prepared an amendment to change its frequency to Channel 217. Faith remains at its originally specified site and has reduced power to preclude interference with other stations including the application of Southwest Allen County Schools, which in turn is also filing an amendment reducing its power to preclude any interference.

The acceptance of Faith's amendment is a condition of the Agreement. Acceptance of the amendment will permit two non-profit institutions to provide different programming formats and will conserve the Commission's resources as well as those of the parties. This amendment will not require enlargement of issues or the addition of new parties. This amendment was not foreseeable because Faith had no idea when it filed its original application that it would not be able to work out a shared-use agreement or reach some other type of accord with the competing applicant other than the instant agreement requiring a change in frequency.

While § 73.373(a)(1) of the Commission's rules specifies that a change in frequency is a major amendment requiring the assignment of a new file number, that rule has been interpreted to apply to pre-designation and not post-designation amendments, such as the instant amendment. See Exhibit A, Memorandum Opinion and Order, FCC 89M-2039, released August 7, 1989.

Wherefore, Faith Christian Academy respectfully requests that its petition be granted and that its application be amended to specify a new frequency on channel 217.

Respectfully submitted,

FAITH CHRISTIAN ACADEMY

By:


William H. Crispin

VERNER, LIIPFERT, BERNHARD,
McPHERSON & HAND, CHARTERED
901 15th Street, N.W., Ste. 700
Washington, D.C. 20005-2301
(202) 371-6080

November 5, 1992

Its Attorneys

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FCC 89M-2039
011236

In re Applications of	}	MM Docket No. 89-309
	}	
CABRINI COLLEGE	}	File No. BPED-860725MH
Radnor Township, Pennsylvania	}	
	}	
VILLANOVA UNIVERSITY IN THE	}	
STATE OF PENNSYLVANIA	}	File No. BPED-870402KA
Villanova, Pennsylvania	}	
	}	
BUX-MONT EDUCATIONAL RADIO ASSOCIATION	}	File No. BPED-870514MN
Sellersville, Pennsylvania	}	
	}	
TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA	}	File No. BPED-870515OE
Philadelphia, Pennsylvania	}	
	}	
For a Construction Permit for a	}	
Non-Commercial Educational FM station	}	

MEMORANDUM OPINION AND ORDER

Issued: August 3, 1989; Released: August 7, 1989

1. Under consideration are the following: Petition for Leave to Amend, filed July 10, 1989, by Cabrini College ("Cabrini"); Petition for Leave to Amend, filed July 10, 1989, by Villanova University in the State of Pennsylvania ("Villanova"); Petition for Leave to Amend, filed July 10, 1989, by Bux-Mont Educational Radio Association ("Bux-Mont"); Joint Motion for Approval of Agreement, filed July 10, 1989, by Cabrini, Villanova, Bux-Mont and the Trustees of the University of Pennsylvania ("Penn"); Petition for Leave to Amend, filed July 24, 1989, by Villanova; Petition for Leave to Amend, filed July 25, 1989, by Bux-Mont; Petition for Leave to Amend and Amendment to Application, filed July 25, 1989, by Penn; and Comments on Joint Motion for Approval of Agreement, filed July 28, 1989, by Mass Media Bureau.

2. The joint agreement proposes that the applications of Cabrini, Villanova and Bux-Mont each be granted, subject to the acceptance of an amendment to each applicant's engineering proposal. An engineering amendment to each of these applications was filed simultaneously with the filing of the joint agreement. In addition, the joint agreement contemplates a grant of Penn's pending application with the result that the coverage area of Penn's existing station, WXPB, will expand.

3. The engineering amendments of Cabrini, Villanova and Bux-Mont propose a change in frequency. Cabrini and Villanova propose identical technical facilities. Cabrini and Villanova, which propose a shared-time operation, seek to amend their applications to propose operation on Channel 206A,

rec'd
8-8-89

rather than Channel 203A. Bux-Mont seeks to amend its application to propose operation on Channel 205A, rather than Channel 204A. The applicants contend that a grant of these amendments will provide an aggregate of 2,259,284 people residing in an area of 5,188 square kilometers with the opportunity to receive new non-commercial FM service.

4. The engineering amendments will result in some contour overlap among the applicants. The applicants, therefore, request a waiver of Section 73.509 of the Commission's Rules which prohibits such overlap. The applicants note that the interference will not result in the loss of any present service to any listener. The applicants also note that the Penn proposal involves a relocation of WXPB's transmitter and a sharing with Station WPVI(TV), Philadelphia, of a diplexed antenna. This co-location and diplexing, they contend, will eliminate the interference between WXPB and WPVI(TV), thereby providing additional service to the public.

5. The Mass Media Bureau supports acceptance of the applicants' amendments and approval of the joint agreement and has offered the following comments. Here, the benefit of authorizing new and improved service outweighs the limited interference which will result. Significantly, none of the proposals will result in interference to a non-party to this proceeding, and each of the parties to this proceeding has agreed to accept interference as a condition of receiving a grant. Moreover, as noted by the applicants, no one currently receiving service will lose service as a result of acceptance of the applicants' amendments.

6. Additionally, it is noted that the parties have complied with Section 73.3525 of the Commission's Rules. The documents submitted include declarations from each of the parties asserting that their respective applications were not filed for the purpose of reaching or carrying out the joint settlement agreement. Approval of the agreement is in the public interest because it will eliminate the need for a hearing thereby conserving the resources of the non-commercial applicants and the Commission and further will expedite additional service to the public in the Philadelphia area.

7. In light of the foregoing, the engineering amendments will be accepted and a waiver of Section 73.509 will be granted. The joint agreement will be approved.

8. On July 24, 1989 and July 25, 1989, Villanova, Bux-Mont and Penn filed petitions for leave to amend their applications to provide information called for by the Hearing Designation Order ("HDO"). The Mass Media Bureau has reviewed these amendments and agrees with the applicants that they have met the HDO's requirements.

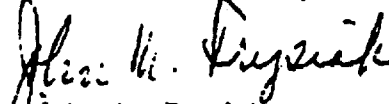
Accordingly, IT IS ORDERED that the Petitions for Leave to Amend, filed July 10, 1989, by Cabrini, Villanova and Bux-Mont ARE GRANTED, and the amendments ARE ACCEPTED.

IT IS FURTHER ORDERED that a waiver of Section 73.509 of the Commissions Rules IS GRANTED.

IT IS FURTHER ORDERED that the Petition for Leave to Amend, filed July 24, 1989, by Villanova, the Petition for Leave to Amend, filed July 25, 1989, by Bux-Mont and the Petition for Leave to Amend and Amendment to Application, filed July 25, 1989, by Penn ARE GRANTED, and the amendments ARE ACCEPTED.

IT IS FURTHER ORDERED that the Joint Motion for Approval of Agreement, filed July 10, 1989, by Cabrini, Villanova, Bux-Mont and Penn IS GRANTED and the joint agreement IS APPROVED, the application of the Trustees of the University of Pennsylvania IS GRANTED, the applications of Cabrini College, Villanova University in the State of Pennsylvania and Bux-Mont Educational Radio Association, as amended, ARE GRANTED and this proceeding IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION


John M. Frysiak
Administrative Law Judge

APPLICATION FOR CONSTRUCTION PERMIT FOR
NONCOMMERCIAL EDUCATIONAL BROADCAST STATION
(Carefully read instructions before filing form) Return only form to FCC

For Commission Use Only

File No.

Section I - GENERAL INFORMATION

RECEIVED

1. Name of Applicant

Faith Christian Academy

NOV - 5 1992

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Street Address or P.O. Box

P.O. Box 347

City

Berne

State

IN

ZIP Code

46711

Telephone No. (Include Area Code)

(219) 589-3797

Send notices and communications to the following person
at the address below:

Name

Rev. Doug Rogers

Street Address or P.O. Box

P.O. Box 347

City

Berne

State

IN

ZIP Code

46711

Telephone No. (Include Area Code)

(219) 589-3797

2. This application is for:

☐

AM

☒

FM

☐

TV

(a) Channel No. or Frequency

217

(b) Principal

Community

City

Berne

State

IN

(c) Check one of the following boxes:

☐

Application for NEW station

☐

MAJOR change in licensed facilities; call sign: _____

☐

MINOR change in licensed facilities; call sign: _____

☐

MAJOR modification of construction permit; call sign: _____

File No. of construction permit: _____

☐

MINOR modification of construction permit; call sign: _____

File No. of construction permit: _____

☒

AMENDMENT to pending application; application file number: _____

BPED-901203MN

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. Is this application mutually exclusive with a renewal application?

☐

Yes

☒

No

If Yes, state:	Call letters	Community of License	
		City	State

Section V-B - FM BROADCAST ENGINEERING DATA

FOR COMMISSION USE ONLY

File No. _____
 ASB Referral Date _____
 Referred by _____

Name of Applicant

Faith Christian Academy

Call letters (if issued)

(NEW)

Is this application being filed in response to a window? ☐ Yes ☒ No

If Yes, specify closing date: _____

Purpose of Application: (check appropriate boxes)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Construct a new (main) facility | <input type="checkbox"/> Construct a new auxiliary facility |
| <input type="checkbox"/> Modify existing construction permit for main facility | <input type="checkbox"/> Modify existing construction permit for auxiliary facility |
| <input type="checkbox"/> Modify licensed main facility | <input type="checkbox"/> Modify licensed auxiliary facility |

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

- | | |
|---|--|
| <input type="checkbox"/> Antenna supporting-structure height | <input type="checkbox"/> Effective radiated power |
| <input type="checkbox"/> Antenna height above average terrain | <input type="checkbox"/> Frequency |
| <input type="checkbox"/> Antenna location | <input type="checkbox"/> Class |
| <input type="checkbox"/> Main Studio location | <input type="checkbox"/> Other (Summarize briefly) |

File Number(s) BPED-901203MN

1. Allocation:

Channel No.	Principal community to be served:		
	City	County	State
217	Berne	Adams	IN

Class (check only one box below)

- ☐ A ☒ B1 ☐ B ☐ C3
☐ C2 ☐ C1 ☐ C ☐ D

2. Exact location of antenna.

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.
 Existing tower; 21.08 km at 298 degrees True from Berne, IN; Wells County

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array.
 Otherwise, specify tower location. Specify South Latitude or East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed.

Latitude	40°	44'	50"	Longitude	85°	10'	21"
----------	-----	-----	-----	-----------	-----	-----	-----

3. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? ☒ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both.

WNUY BPH-881205ID

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 2)

4. Does the application propose to correct previous site coordinates?

☐ Yes ☒ No

If Yes, list old coordinates.

Latitude	0	'	"	Longitude	0	'	"
----------	---	---	---	-----------	---	---	---

5. Has the FAA been notified of the proposed construction?

☒ Yes ☐ No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No.
FAA-1

Date 11/07/90 Office where filed AGL Des Plaines, IL

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

Landing Area	Distance (km)	Bearing (degrees True)
(a) <u>Miller</u>	<u>6.5</u>	<u>238</u>
(b) _____	_____	_____

7. (a) Elevation: *(to the nearest meter)*

(1) of site above mean sea level; 246 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 128 meters

(3) of the top of supporting structure above mean sea level $[(aX1) + (aX2)]$ 374 meters

(b) Height of radiation center: *(to the nearest meter)* H = Horizontal; V = Vertical

(1) above ground 105 meters (H)

105 meters (V)

(2) above mean sea level $[(aX1) + (bX1)]$ 351 meters (H)

351 meters (V)

(3) above average terrain 100 meters (H)

100 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(bX3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No.
E-1

9. Effective Radiated Power:

(a) ERP in the horizontal plane 6.3 kw (H*) 6.3 kw (V*)

(b) Is beam tilt proposed?

☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No.
N/A

_____ kw (H*) _____ kw (V*)

*Polarization

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 3)

10. Is a directional antenna proposed?

☒ Yes ☐ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of horizontally and vertically polarized radiated components in terms of relative field.

Exhibit No.
E-2

11. Will the main studio be located within the 70 dBu or 3.16 mV/m contour?

☒ Yes ☐ No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.
N/A

12. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast *(except citizens band or amateur)* radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

☒ Yes ☐ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. *(See 47 C.F.R. Sections 73.315(b), 73.316(d) and 73.318.)*

Exhibit No.
E-3

13. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.
E-4

14. Attach as an Exhibit *(name the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
E-5

(a) the proposed transmitter location, and the radials along with profile graphs have been prepared;

(b) the 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mV/m contour; and

(c) the legal boundaries of the principal community to be served.

15. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 1,491.7 sq. km.

Population 229,410

16. Attach as an Exhibit a map *(Sectional Aeronautical charts where obtainable)* showing the present and proposed 1 mV/m (60 dbu) contours.

Exhibit No.
N/A

Enter the following from Exhibit above:

Gain Area _____ sq. mi.

Loss Area _____ sq. mi.

Percent change (gain area plus loss area as percentage of present area) _____ %.

If 50% or more this constitutes a major change. Indicate in question 2(c), Section I, accordingly.

17. For an application involving an auxiliary facility only, attach as an Exhibit a map (*Sectional Aeronautical Chart or equivalent*) that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.

N/A

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675. (File No.: _____)

18. Terrain and coverage data *to be calculated in accordance with 47 C.F.R. Section 73.3131*.

Source of terrain data: *(check only one box below)*

☒ Linearly interpolated 30-second database

☐ 7.5 minute topographic map

(Source: NGDC)

☐ Other *(briefly summarize)*

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1 mV/m contour (kilometers)
0	See Exhibit E-6	
45		
90		
135		
180		
225		
270		
315		

Allocation Studies

(See Subpart C of 47 C.F.R. Part 73)

19. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?

☐ Yes

☒ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

Exhibit No.

N/A

20. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada?

☒ Yes ☐ No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947.

Exhibit No.
E-7

21. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following:

Exhibit No.
E-7

- (a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
- (b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
- (c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
- (d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
- (e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
- (f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
- (g) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (h) The name of the map(s) used in the Exhibit(s).

22. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as an Exhibit information required in 1/ *(separation requirements involving intermediate frequency (i.f.) interference)*.

Exhibit No.
E-7

23.(a) Is the proposed operation on Channel 218, 219, or 220?

☐ Yes ☒ No

(b) If the answer to (a) is yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207?

☐ Yes ☐ No
(N/A)

(c) If the answer to (b) is yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223.

Exhibit No.
N/A

(d) If the answer to (b) is no, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.
N/A

1/ A showing that the proposed operation meets the minimum distance separation requirements. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 6)

- (e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.
N/A

- (1) Protected and interfering contours, in all directions (360), for the proposed operation.
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibit(s).

24. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525?

☒ Yes ☐ No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.
E-8

25. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)?

☐ Yes ☒ No

If Yes, attach as an Exhibit information required in 1/. (Except for Class D (secondary) proposals.)

Exhibit No.
N/A

26. Environmental Statement (See 47 C.F.R. Section 1.1301 et seq.)

Would a Commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact?

☒ Yes ☐ No

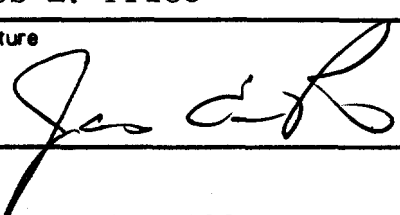
If you answer Yes, submit as an Exhibit an Environmental Assessment required by Section 1.1311.

Exhibit No.
E-9

If No, explain briefly why not.

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined the foregoing and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed)	Relationship to Applicant (e.g., Consulting Engineer)
James E. Price	Technical Consultant
Signature	Address (Include ZIP Code)
	Sterling Communications, Inc. P.O. Box 80484 Chattanooga, TN 37411
Date	Telephone No. (Include Area Code)
October 12, 1992	(615) 899-9393

FAA-1
Faith Christian Academy
Berne, Indiana
FAA Determination Of No Hazard

FEDERAL AVIATION ADMINISTRATION
Great Lakes Region, AGL-530
2300 East Devon Avenue
Des Plaines, IL 60018

In Reply Refer To
AERONAUTICAL STUDY NO.
90-AGL-1643-OE

ACKNOWLEDGMENT OF NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION

PROponent:

Rev. Doug Rogers
Faith Baptist Church
P. O. Box 347
Berne, IN 46711

CONSTRUCTION LOCATION:
Bluffton, IN

LATITUDE : 40-44-50.
LONGITUDE: 085-10-21.

	AGL	AMSL
HEIGHT:	420. ft	1226. ft

CONSTRUCTION PROPOSED: Add Additional Sidemount Antenna to Existing 420' Antenna Tower.
FREQUENCY: 91.1; 461.55, 861.4625, 862.4625, 863.4625; 101.1000 MHz.
EFFECTIVE RADIATED POWER (ERP): 25 Kilowatts; 300, 120, 120 Watts; 3.0 Kilowatts.

The Federal Aviation Administration acknowledges receipt of notice dated 08/10/90, concerning the proposed construction or alteration described above.

A study has been conducted under the provisions of Part 77 of the Federal Aviation Regulations to determine whether the proposed construction would be an obstruction to air navigation, whether it should be marked and lighted to enhance safety in air navigation, and whether supplemental notice of start and completion of construction is required to permit timely charting and notification to airmen. The findings of that study are as follows:

The proposed construction is not identified as an obstruction under any standard of FAR, Part 77, Subpart C and would not be a hazard to air navigation.

The structure should be obstruction marked and lighted per FAA Advisory Circular AC 70/7460-1, "Obstruction Marking and Lighting", Chapters 3, 4, 5 & 9

Supplemental notice is required at least 48 hours before the start of construction and within 5 days after construction reaches its greatest height (Use enclosed FAA Form 7460-2).

This determination expires on 05/10/91 unless:

- (a) extended, revised or terminated by the issuing office;
- (b) the construction is subject to the licensing authority of the Federal Communications Commission and an application for a construction permit is made to the FCC on or before the above expiration date. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or on the date the FCC denies the application.

NOTE: Any request for extension of the effective period of this determination must be postmarked or delivered to the issuing office at least 15 days prior to the expiration date.

If the structure is subject to the licensing authority of the FCC, a copy of this acknowledgement will be sent to that Agency.

>>>> NOTICE IS REQUIRED ANYTIME THE PROJECT IS ABANDONED OR THE PROPOSAL IS MODIFIED <<<<

Remarks:

The study included the proponent's letter dated 10-29-90 agreeing to attenuate transmitter spurious radiation in the frequency range 118 to 137 MHz at least 86 dB below the unmodulated carrier level.

Signed  Douglas F. Powers
Manager, System Management Branch

Issued In: Des Plaines, Illinois
On: 11/07/90

Exhibit E-1
Faith Christian Academy
Berne, Indiana
Vertical Plan Sketch

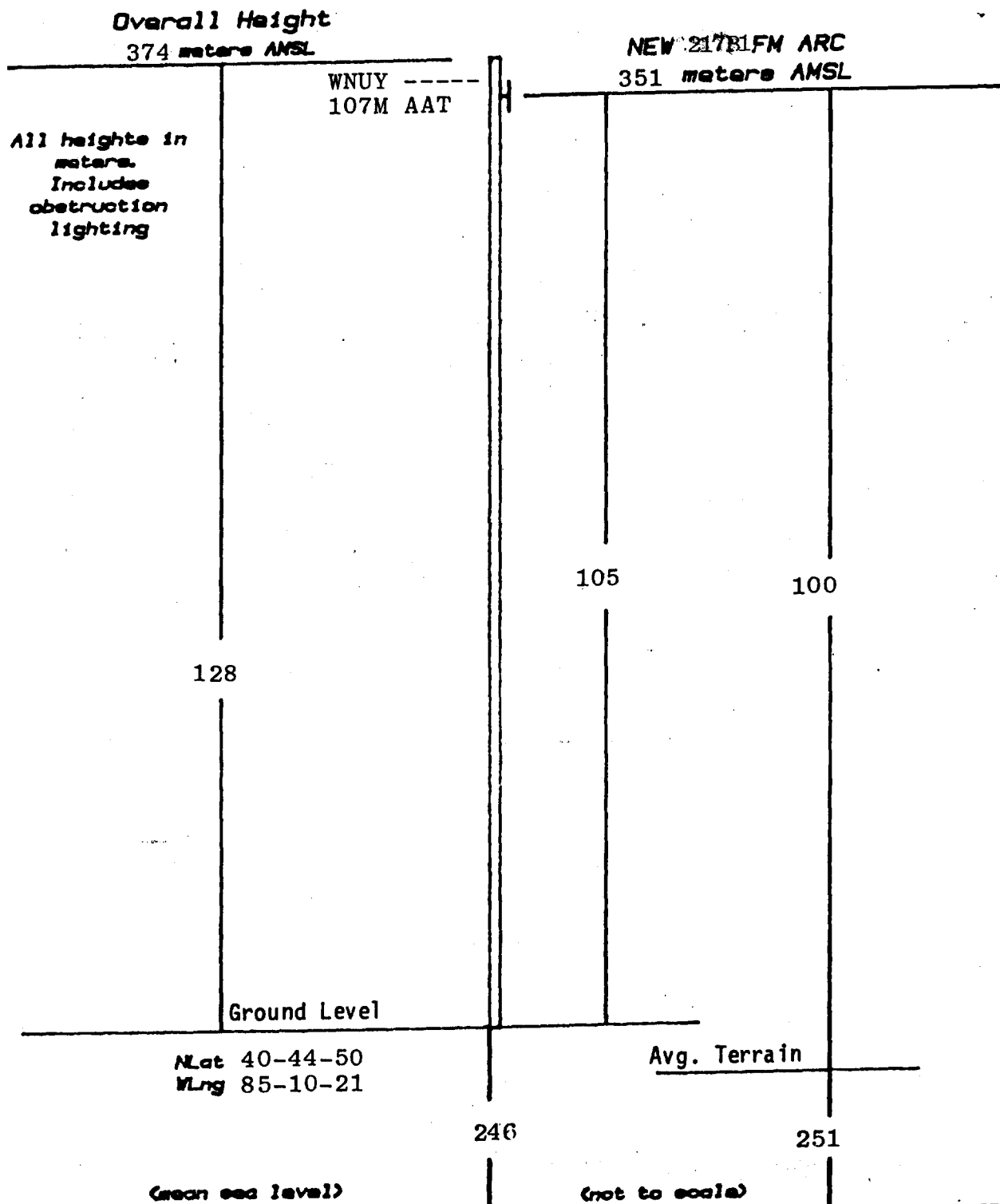


Exhibit E-2
Faith Christian Academy
Berne, Indiana
Proposed Use Of A Directional Antenna

SEPTEMBER 15, 1992

Electronics Research, Inc., has been asked to provide a custom fabricated directional antenna system that is specially designed to meet the F.C.C. requirements and the general needs of the proposed new non-commercial educational FM broadcast station at Berne, Indiana.

The antenna is the E.R.I. DA1005-1A-SP configuration. The horizontal component of the dual polarized system consists of two half-wavelength spaced horizontally polarized bays using two driver horizontal dipoles and 2 horizontal parasitic elements per bay. The vertical component of the system consists of one vertical radiating bay using one driver vertical dipole and 2 vertical parasitic elements. The vertical bay is interspersed between the horizontal bays. A power divider will be used near the bottom of the antenna to feed the system. The antenna will be tested on a tower, identical to the structure the station plans to use to support the proposed array. All tests will be performed on a frequency of 91.3 megahertz which is the center of the FM broadcast channel sought by the new station.

DESCRIPTION OF THE TEST PROCEDURE

Pattern measurements will be made on a fifty-acre antenna pattern range which is owned and operated by Electronics Research, Inc. The test antenna will consist of the complete dual polarized system with the associated horizontal and vertical parasitic elements. The elements and brackets that will be used in this test are electrically equivalent to those that will be supplied with the proposed antenna. Sections of 3 1/8 inch o.d. rigid coaxial line will be used to feed the test antenna, and section of 3 1/8 inch o.d. rigid outer conductor only will be attached above the test antenna. The lines will be properly grounded during all tests.

SEPTEMBER 15, 1992

DUAL POLARIZED DIRECTIONAL ANTENNA SYSTEM
PROPOSED FOR BERNE, INDIANA

(Continued)

The proof-of-performance will be accomplished using a supporting structure of identical dimensions and configuration as the proposed tower, including all braces, ladders, conduits, coaxial lines and other appurtenances that are included in the actual aperture at which the proposed antenna will be installed. The tower will be erected vertically on a turntable mounted on a non-metallic building with the antenna centered vertically on the structure, making the center of radiation of the test approximately 25 feet above ground. The turntable is equipped with a motor drive and azimuth indicating mechanism. Resolution of this azimuth measuring system is one-tenth of a degree.

The antenna under test will be operating in the transmitting mode and fed from a Wavetek Model 3000 signal generator. The frequency of the signal source will be set at 89.7 MHz and will be constantly monitored by an Anritsu Model ML521B measuring receiver.

A broad-band horizontal and vertical dipole system, located approximately 628 feet from the test antenna, and mounted at the same height above terrain as the center of the antenna under test, will be used to receive the emitted test signals. The signals received by the dipole system will be fed to the test building by way of two buried Heliax cables to an Anritsu Model ML521B measuring receiver. This data will be interfaced to a Hewlett-Packard Model 9872C plotter by means of an Hewlett-Packard Model 86 computer system. Relative field strength will be plotted as a function of azimuth.

The measurements will be performed by rotating the test antenna in a counter-clockwise direction and plotting the received signal on polar co-ordinated graph paper in a clockwise direction. Both horizontal and vertical components will be recorded separately.

CONCLUSIONS

The horizontal component of the dual polarized system consists of two half-wavelength spaced horizontally polarized bays using two driven horizontal dipoles and 2 horizontal parasitic

SEPTEMBER 15, 1992

DUAL POLARIZED DIRECTIONAL ANTENNA SYSTEM
PROPOSED FOR BERNE, INDIANA

(Continued)

elements per bay. The vertical component of the system consists of one vertical radiating bay using one driver vertical dipole and 2 vertical parasitic elements. The vertical bay is interspersed between the horizontal bays. A power divider will be used near the bottom of the antenna to feed the system. The power distribution and phase relationship will be fixed when the antenna is manufactured. Proper maintenance of the elements should be all that is required to maintain the pattern in adjustment.

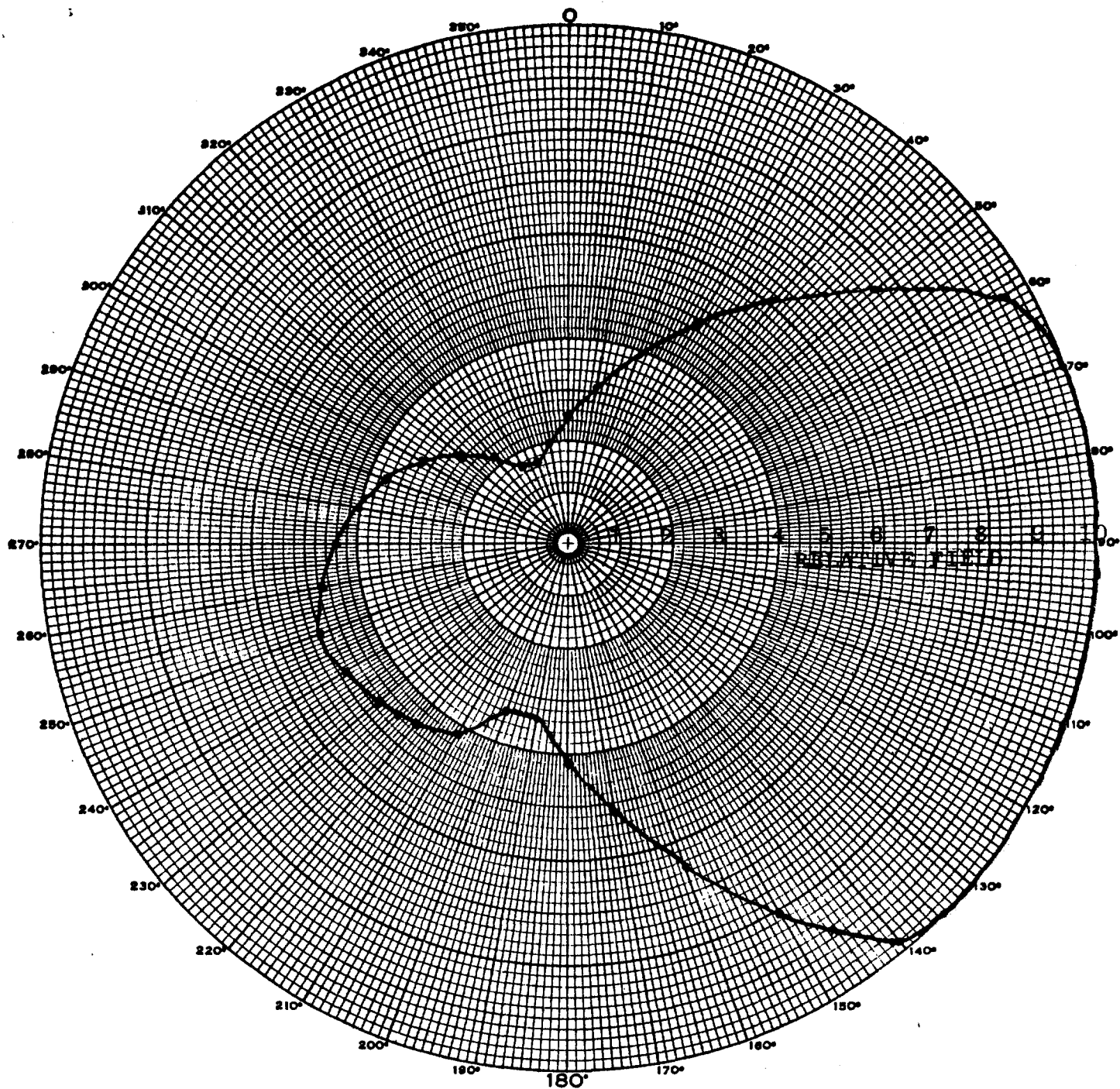
The pattern shown on Figure #1 is based on measured data with a similar array orientated on a similar structure at a bearing of north 70 degrees east. Actual antenna orientation will be determined when the antenna is tested. Blue prints provided with the antenna will show the proper antenna orientation alignment. The antenna alignment procedure should be directed by a licensed surveyor as prescribed by the FCC.

Deicers are not supplied and are not available. The use of radomes is recommended if icing conditions will exist at the proposed site.

Figure #1 represents the maximum value of either the horizontal or vertical component at any azimuth. A calculated horizontal plane relative field pattern for the vertically polarized component is shown on Figure #2 attached. The power in the maximum will reach 6.3 kilowatts (7.99 dBk).

The R.M.S. of the vertically polarized horizontal plane component does not exceed the R.M.S. of the horizontally polarized plane component.

The envelope pattern obtained from the maximum individual horizontal or vertical components will not exceed a rate of change of 2 dB per any ten degree change in azimuth as measured in the horizontal plane.



1 unit = 0.02 Field

ERI CUSTOM DIRECTIONAL ANTENNA

Exhibit E-2 - Figure 1
Faith Christian Academy
Berne, Indiana
Horizontal Antenna Plot

VERTICAL ANTENNA PATTERN

Exhibit E-2 - Fig. 21 Faith Ch. Academy; Berne IN: 013089

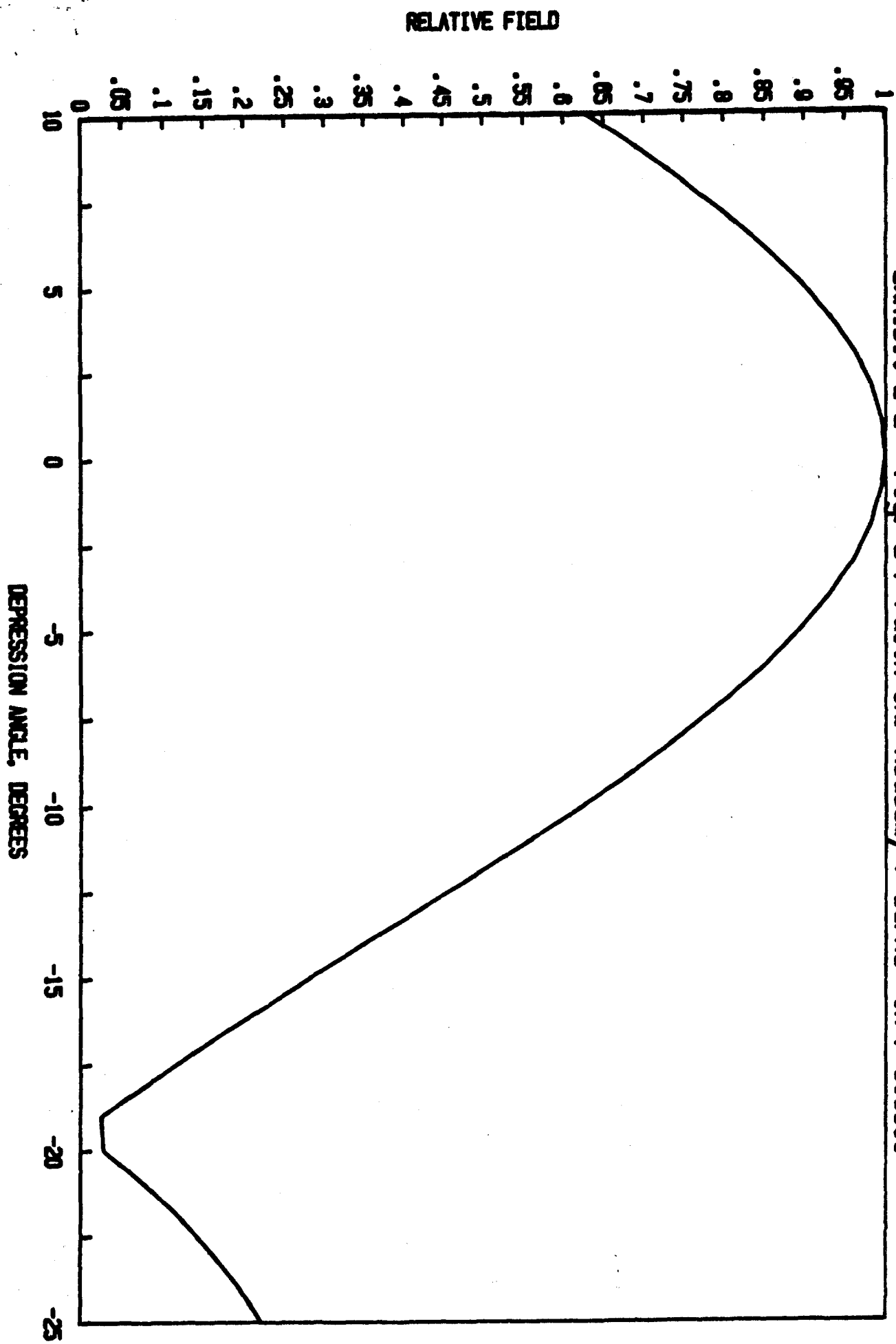


Exhibit E-2 Figure 3
Faith Christian Academy
Berne, Indiana
Antenna Relative Field Pattern

Maximum ERP is 6.30 kilowatts

Horizontal & Vertical Components

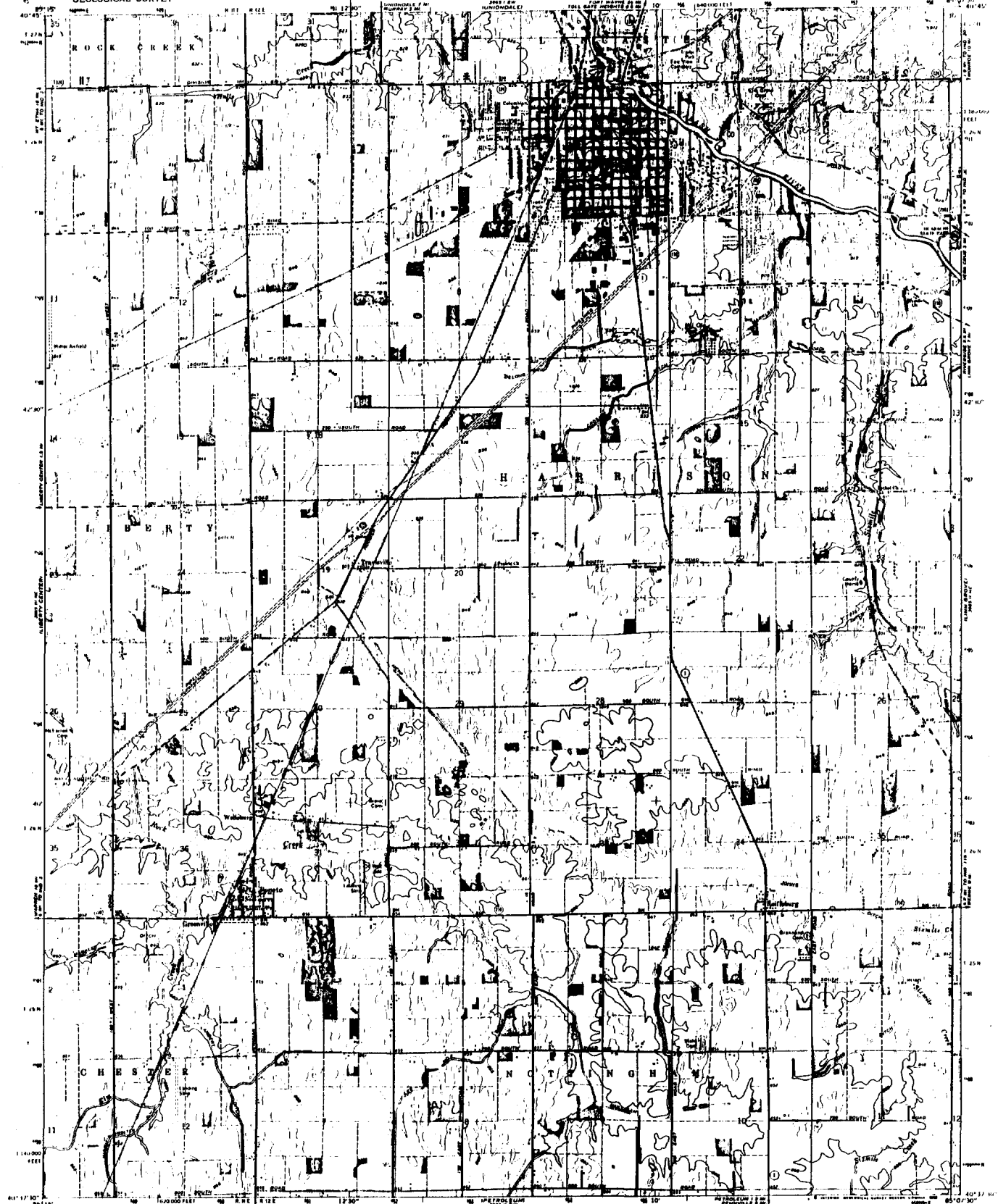
Asimuth	Field	dBk	kilowatts	Asimuth	Field	dBk	kilowatts
0	0.2500	-4.05	0.3938	180	0.4200	0.46	1.1113
5	0.2800	-3.06	0.4939	185	0.3800	-0.41	0.9097
10	0.3100	-2.18	0.6054	190	0.3400	-1.38	0.7283
15	0.3500	-1.13	0.7717	195	0.3400	-1.38	0.7283
20	0.3900	-0.19	0.9582	200	0.3400	-1.38	0.7283
25	0.4400	0.86	1.2197	205	0.3700	-0.64	0.8625
30	0.4900	1.80	1.5126	210	0.4200	0.46	1.1113
35	0.5500	2.80	1.9058	215	0.4300	0.66	1.1649
40	0.6100	3.70	2.3442	220	0.4500	1.06	1.2758
45	0.6800	4.64	2.9131	225	0.4600	1.25	1.3331
50	0.7600	5.61	3.6389	230	0.4750	1.53	1.4214
55	0.8500	6.58	4.5517	235	0.4700	1.44	1.3917
60	0.9500	7.55	5.6858	240	0.4900	1.80	1.5126
65	0.9900	7.91	6.1746	245	0.4950	1.89	1.5437
70	1.0000	7.99	6.3000	250	0.5000	1.97	1.5750
75	1.0000	7.99	6.3000	255	0.4900	1.80	1.5126
80	1.0000	7.99	6.3000	260	0.4750	1.53	1.4214
85	1.0000	7.99	6.3000	265	0.4590	1.23	1.3273
90	1.0000	7.99	6.3000	270	0.4400	0.86	1.2197
95	1.0000	7.99	6.3000	275	0.4300	0.66	1.1649
100	1.0000	7.99	6.3000	280	0.4050	0.14	1.0334
105	1.0000	7.99	6.3000	285	0.3830	-0.34	0.9241
110	1.0000	7.99	6.3000	290	0.3700	-0.64	0.8625
115	1.0000	7.99	6.3000	295	0.3500	-1.13	0.7717
120	1.0000	7.99	6.3000	300	0.3200	-1.90	0.6451
125	1.0000	7.99	6.3000	305	0.2900	-2.76	0.5298
130	1.0000	7.99	6.3000	310	0.2600	-3.71	0.4259
135	1.0000	7.99	6.3000	315	0.2400	-4.40	0.3629
140	0.9800	7.82	6.0505	320	0.2200	-5.16	0.3049
145	0.8900	6.98	4.9902	325	0.2000	-5.99	0.2520
150	0.8100	6.16	4.1334	330	0.1780	-7.00	0.1996
155	0.7100	5.02	3.1758	335	0.1780	-7.00	0.1996
160	0.6500	4.25	2.6618	340	0.1780	-7.00	0.1996
165	0.5700	3.11	2.0469	345	0.1790	-6.95	0.2019
170	0.5200	2.31	1.7035	350	0.2000	-5.99	0.2520
175	0.4700	1.44	1.3917	355	0.2250	-4.96	0.3189

Exhibit E-3
Faith Christian Academy
Berne, Indiana
Stations Within 60 Meters Of Proposed Antenna

FM broadcast station WNUY holds a construction permit (BPH-881205ID) to locate its antenna on the existing tower structure proposed as the supporting structure in the instant application. WNUY is authorized to operate with an effective radiated power of 2.6 kilowatts with an antenna height 107 meters above average terrain.

The WNUY antenna (ARC 107 meters AAT) will not share a common aperture with the proposed new NCE-FM station (ARC 100 meters AAT). There will be a 2 meter physical separation between the antennae of WNUY and the proposed new NCE-FM antenna.

The applicant is aware of its responsibility to preserve the ambient suitability of the site for pre-existing facilities, and accepts such responsibility as a pre-condition of grant whether informally or as a specific condition of its Construction Permit. Should special means such as pass-band or stop-band filters and special mounting considerations be required to comply with applicable technical standards and the generally accepted principles of good engineering practice, the applicant stands ready to implement such measures as may be found necessary at construction in order to preserve any pre-existing services on the host structure.



Mapped, edited, and published by the Geological Survey
Control by USGS, NOS/NOAA, and Indiana Flood Control
and Water Resources Commission

Topography by photogrammetric methods from aerial photographs
taken 1960. Field checked 1962.
Polyconic projection. 10,000-foot grid ticks based on Indiana coordinate
system, east zone. 1000-meter Universal Transverse Mercator grid
ticks, zone 16, shown in blue. 1927 North American Datum.
To place on the projected North American Datum 1983 move
the projection 1 meter south and 3 meters west as
shown by dashed corner ticks.
Five red dashed lines indicate selected fence and field lines where
generally visible on aerial photographs. This information is uncharted
Red but indicates areas in which only modern buildings are shown
There may be private landholdings within the boundaries of
the National or State reservations shown on this map



SCALE 1:24,000
CONTOUR INTERVAL 5 FEET
NATIONAL MIDDLEBURY DATUM OF 1929
THIS MAP COMPLETES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80226 OR RESTON, VIRGINIA 20192
AND INDIANA DEPARTMENT OF NATURAL RESOURCES, INDIANAPOLIS, INDIANA 46204
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

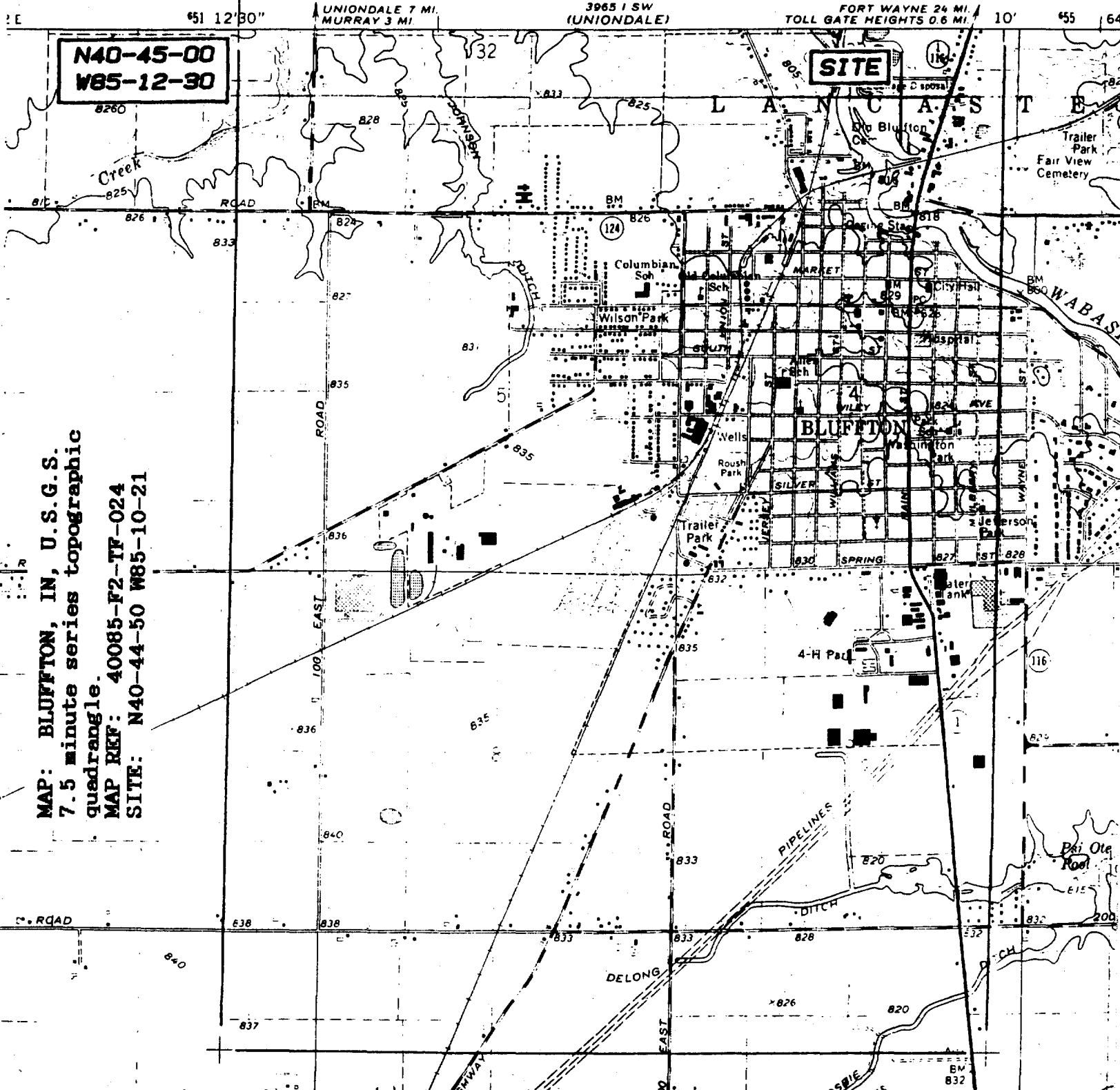
ROAD CLASSIFICATION
Heavy duty ——— Light duty ———
Medium duty ——— Unimproved dirt ———
State Route ———
UNIMPROVED DIRT ROADS
Revisions shown in purple and modified to conform with
with State of Indiana symbols for aerial and ground
taken 1962 and other sources. This information not included in
Map dated 1962

BLUFFTON, IND.
80000 72-17-924
1962
PUBLISHED BY THE GEOLOGICAL SURVEY
GSA 8000 72-17-924

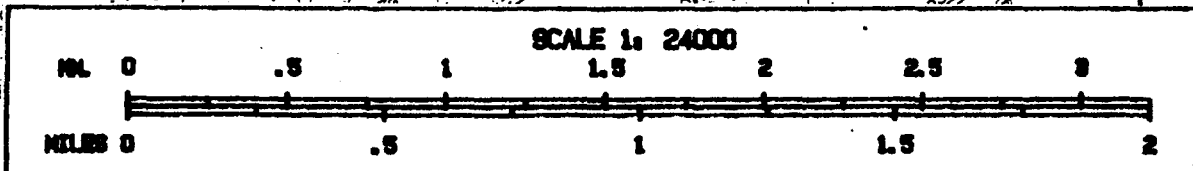
**Exhibit E-4 - Figure 1
Faith Christian Academy
Berne, Indiana
Site Map - Reduced**

Exhibit E-4 - Figure 2
Faith Christian Academy
Berne, Indiana
Site Map - Full Scale

STATE OF INDIANA
 INDIANA DEPARTMENT OF CONSERVATION
 INDIANAPOLIS, INDIANA



MAP: BLUFFTON, IN, U.S.G.S.
 7.5 minute series topographic
 quadrangle.
 MAP REF: 40085-F2-TF-024
 SITE: N40-44-50 W85-10-21



H A - R R I S

Exhibit E-5
Faith Christian Academy
Berne, Indiana
60 dBu Service Contour
Chicago Sectional Aero. Chart

